



**HIGH PERFORMANCE  
SUBWOOFERS  
MODELS PSPL-10 AND PSPL-12**

**OWNER'S MANUAL**



Congratulations on your purchase of the **Prestige** High Performance Subwoofer. The **Prestige** Subwoofers are designed to provide you with high quality Bass reproduction required to make your car audio system perform to its full potential.

### **PRESTIGE Subwoofer Features**

- Dual 2 Ohm voice coil for maximum flexibility and performance
- Low-Q parameters for Isobaric and small sealed box enclosures
- Vented magnet for improved performance
- Chrome-plated binding posts that can accept up to 10-gauge wire
- Long throw suspension assembly
- Carbon injection woofer cone

### **SUBWOOFER PARAMETERS**

	<b><u>PSPL-10</u></b>	<b><u>PSPL-12</u></b>
Nominal Power Rating	300 Watts	350 Watts
Maximum Power Rating	600 Watts	700 Watts
Ferrite Magnet	60 Ounce	80 Ounce
Frequency Response	20 Hz-2.5 kHz	20 Hz-2.5 kHz
Resonant Frequency (F/O)	40 Hz $\pm$ 20%	35 Hz $\pm$ 20%
VC Diameter	1.5"	2.0"
Sound Pressure Level	87dB $\pm$ 1.5 dB	88 dB $\pm$ 1.5 dB
Xmax	9.5 mm	9.5 mm
Nominal Impedance	2 Ohms x 2	2Ohms x 2
DCR	1.98 Ohms	1.98 Ohms
Speaker Weight	4.6 kg	5.8 kg

**WARNING:** High-powered car audio systems may produce sound pressure levels that exceed the threshold at which hearing loss may result. They may also impair a driver's ability to hear traffic sounds or emergency vehicles. Use common sense and practice safe listening habits when listening to your audio system.

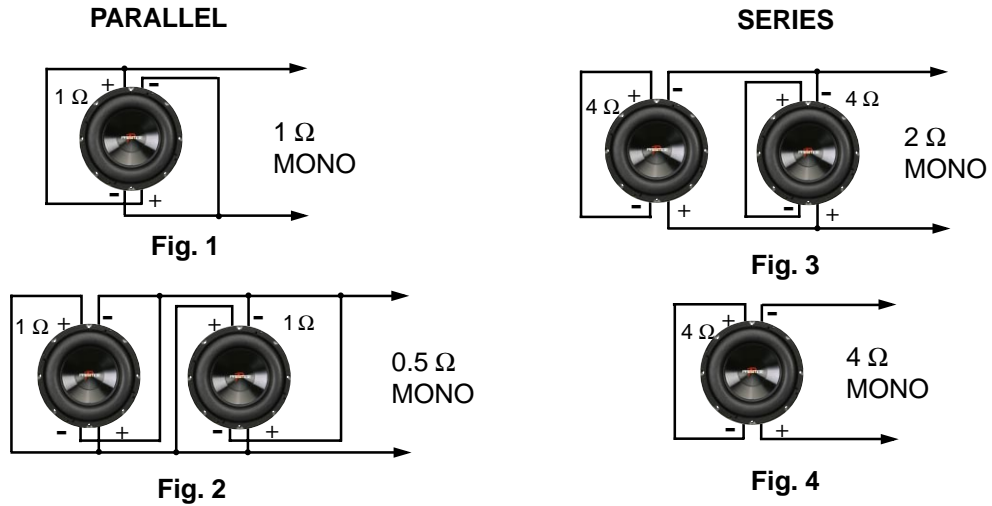
### **DUAL VOICE COIL WIRING**

**CAUTION:** Never connect only one voice coil of a dual voice coil woofer. Both must be driven at the same time for proper operation. Never connect an amplifier to an impedance load lower than it is rated to handle.

### **SERIES/PARALLEL MONAURAL CONNECTION**

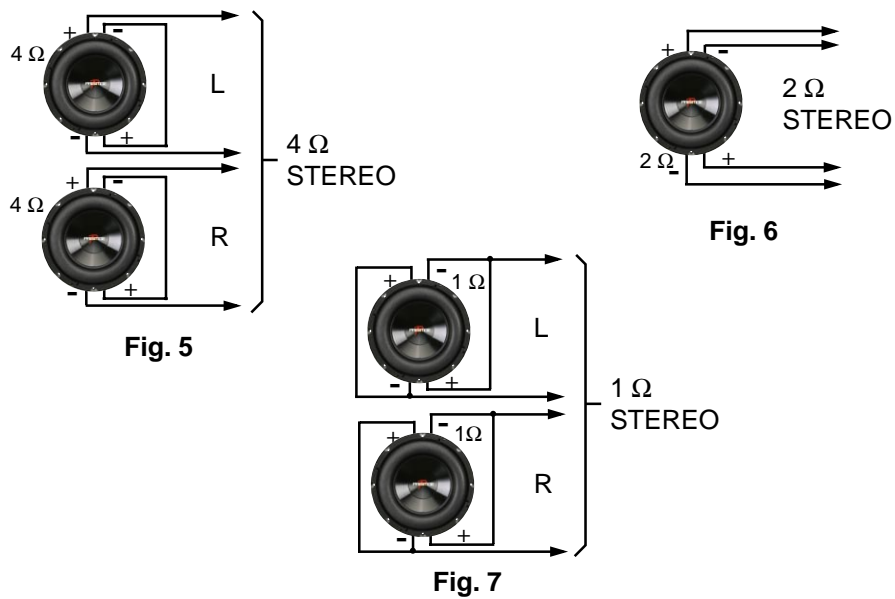
**Parallel** wiring for a single, dual-voice coil 2-Ohm woofer in a monaural system will result in a total impedance load of 1 Ohm at the amplifier, (See Fig. 1) if your amplifier is rated to drive 1 Ohm in bridged or one-channel operation. If each of two dual-voice coil 2-Ohm woofers are connected in parallel and then wired to each

other in parallel, a 0.5-Ohm monaural output would result (See Fig. 2). On the other hand, if your amplifier is rated for 2-Ohm operation in bridged or one-channel operation, series-connect the woofer voice coils (See Fig. 3). If the amplifier is rated for 4 Ohms, interconnect the voice coils of the woofer in series as shown to obtain an 4-Ohm monaural output (See Fig. 4).



### SERIES/PARALLEL STEREO CONNECTION

**Series** wiring of each of two, dual voice-coil 2 Ohm woofers will result in a total impedance load of 4 Ohms at each channel of the amplifier (See Fig. 5). Otherwise, connect one woofer to each channel for 2 Ohm stereo operation (See Fig. 6), or two parallel-wired woofers (one-per-channel) for 1-Ohm stereo operation (See Fig.7).



## **INSTALLATION RECOMMENDATIONS**

To realize the utmost in sound reproduction from your subwoofer(s), follow these installation recommendations:

- Use a quality large gauge wire to connect your subwoofer to the amplifier
- Use a subwoofer crossover to remove unwanted higher frequencies
- Position the enclosure in the rear of the vehicle with the subwoofer facing rearward to improve bass response and avoid cancellation of audio frequencies

## **ENCLOSURE CONSTRUCTION RECOMMENDATIONS**

To enhance subwoofer performance, the following general recommendations should be addressed when constructing the speaker enclosure:

- Use 3/4" MDF for your construction material
- Glue all joint seams
- Screw all joints tight
- Brace all walls

## **DESIGNING AND BUILDING YOUR SPEAKER ENCLOSURE**

The following parameters are offered to assist you in designing your own enclosure. There are many computer software programs available on the market that, along with this information, will allow you to construct the type of enclosure that best suits your needs.

To obtain the best possible results, we suggest you use our recommended enclosure designs and have an automotive sound professional build your enclosure.

### Thiele/Small Parameters

Parameters	PSPL-10		PSPL-12	
	Series	Parallel	Series	Parallel
Fs	38.88 Hz	38.40 Hz	32.44 Hz	32.14 Hz
Re	3.97 Ohms	0.95 Ohms	4.01 Ohms	0.99 Ohms
Res	31.88 Ohms	4.32 Ohms	41.37 Ohms	10.37 Ohms
Qms	3.89	2.55	4.41	4.34
Qes	0.48	0.56	0.43	0.42
Qts	0.43	0.46	0.39	0.38
R2	8.69 Ohms	2.53 Ohms	12.65 Ohms	3.18 Ohms
Vas (Sd)	29.44 Ltrs	30.17Ltrs	54.81 Ltrs	55.84 Ltrs
Mms (Sd)	68.43Gms	68.43Gms	106.45 Gms	106.45 Gms
Cms (Sd)	245 M/Ntn	251 M/Ntn	226 M/Ntn	230 M/Ntn
Bl (Sd)	11.31 Tesla-M	5.30 Tesla-M	14.27 Tesla-M	7.16 Tesla-M
SPLref (Sd)	87.4 dB	86.7 dB	88,2 dB	88.3 dB

## Recommended Enclosure Designs

	<b>PSPL-10</b>	<b>PSPL-12</b>
<b>SEALED BOX</b>	(Vb) Box Volume = 0.56 Cu. Ft. F3: 42 Hz Dimensions: 11.5" W x 16" H x 5.25" D	(Vb) Box Volume = 0.77 Cu. Ft. F3: 64 Hz Dimensions: 13.5" W x 17.75" H x 5.5" D
<b>VENTED BOX</b>	(Vb) Box Volume = 1.15 Cu. Ft. F3: 42 Hz Dimensions: 12.5" W x 20.25" H x 7.75" D (P) Port = 2" ID x 7.875" Long	(Vb) Box Volume = 1.68 Cu. Ft. F3: 36 Hz Dimensions: 14.13" W x 23" H x 8.75" D (P) Port = 3" ID x 8.75" Long
<b>BANDPASS BOX (4th order)</b>	Vbt = 1.15 Cu. Ft. (total) Vbs = .58 Cu.Ft. (sealed side) Vbp = .57 Cu. Ft. (ported side) (speaker loads into this side) Port = 3" ID x 9.25" Long F3: 39 Hz & 100 Hz with negligible gain 10" W (inside) x 16.125" H (inside) x 6.125" D (inside) (sealed side) x 6" D (inside) (vented side)	Vbt = 1.23 Cu. Ft. (total) Vbs = .59 Cu.Ft. (sealed side) Vbp = .64 Cu. Ft. (ported side) (speaker loads into this side) Port = 3" ID x 7.125" Long F3: 38 Hz & 115 Hz with negligible gain 12" W (inside) x 16.125" H (inside) x 5.125" D (inside) (sealed side) x 5.625" D (inside) (vented side)

